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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,519	10/17/2001	Antonio Abbondanzio	RPS920010145US1	7673
25299	7590	06/16/2005	EXAMINER	
IBM CORPORATION			TANG, KENNETH	
PO BOX 12195			ART UNIT	PAPER NUMBER
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RESEARCH TRIANGLE PARK, NC 27709			2195	

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/981,519	ABBONDANZIO ET AL.	
	Examiner	Art Unit	
	Kenneth Tang	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 21 March 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-22 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-22 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

1. This final action is in response to the Amendment filed on 3/21/05. Applicant's arguments have been fully considered but they are not deemed to be persuasive.
2. Claims 1-22 are presented for examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention:
 - a. In claim 1, "switching" (line 1, preamble) is indefinite because there is no relationship made with anything else in the claim regarding switching. No switching is occurring in the body of the claim.
 - b. Claim 8 is rejected for the same indefinite reasons as stated above in the rejection of claim 1.
 - c. In claim 15, it is not made explicitly clear in the claim language whether this is a system or a method claim. In line 1, a system claim is indicated, but in lines 11-22, the limitations start to resemble a method claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bottom (US 2002/0194412 A1) in view of DeForest et al. (hereinafter DeForest) (US 6,446,129 B1).

5. As to claim 1, Bottom teaches a method for automatically switching (“hot swap” done with switch blades) remote shared devices (USB devices) in a dense (high-density) server environment ([0020], [0025]-[0026], [0029]) comprising the steps of: accessing (communication with the midplane 170) a shared device (USB device via media blade) from a server blade ([0026], [0029]); and

wherein if said shared device is not being accessed by said server blade then the method further comprises the steps of waiting to receive a response (monitoring and alarming functions of the Active Manager utilizing Server System Management) that said shared device is available (waiting until alarm is “tripped”) ([0026]).

6. Bottom teaches monitoring and alarming functions of an Active Manager utilizing Server System Management that manages the communication between the server blades and shared devices ([0029]). However, Bottom fails to explicitly teach receiving a request to access, issuing a query, and if not accessed, receiving a response of not available. DeForest teaches blade processors for performing the functions and operations to maintain and provide a shared resource (*col. 6, lines 20-27*) with a manager that receives a request to access a shared device, issuing a

query as to whether the device is being accessed, and if not accessed, receiving a response of not available and waiting to receive a response that it is available (*lines 35-55*).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the feature of receiving a request to access, issuing a query, and if not accessed, receiving a response of not available to Bottom's manager that handles the controls the switching because this improves the managing of the shared resource, which will in turn, decrease cost and complexity, etc. (*col. 2, lines 11-36*).

7. As to claim 2, Bottom teaches determining (Active Manager utilizing Server System Management) if said shared device is being accessed (*[0020], [0025]*).

8. As to claim 3, Bottom teaches wherein if said shared device is not being accessed then the method further comprises the steps of:

connecting said shared device with said server blade (connection with a blade interface of the midplane and media blade having a connection with a server blade) (*[0031]-[0033]*); and transferring ("hot swap" done with switch blades) said request to access said shared device to said shared device (*[0020] and [0025]*).

9. As to claim 4, Bottom teaches wherein if said shared device is being accessed then the method further comprises the step of determining (monitoring and alarming functions of the Active Manager utilizing Server System Management) if said shared device is being accessed by said server blade (*[0026]*).

10. As to claim 5, Bottom teaches wherein if said shared device is being accessed by said server blade then the method further comprises the steps of:

connecting said shared device with said server blade (connection with a blade interface of the midplane and media blade having a connection with a server blade) (*[0031]-[0033]*); and transferring (“hot swap” done with switch blades) said request to access said shared device to said shared device (*[0020] and [0025]*).

11. As to claim 6, Bottom teaches receiving said response that said shared device is available (monitoring and alarming functions of the Active Manager utilizing Server System Management and waiting until alarm is “tripped”) (*[0026]*); connecting said shared device with said server blade (connection with a blade interface of the midplane and media blade having a connection with a server blade) (*[0031]-[0033]*); and transferring (“hot swap” done with switch blades) said request to access said shared device to said shared device (*[0020] and [0025]*).

12. As to claim 7, Bottom teaches wherein said shared device is a Universal Serial Bus device (*[0029]*).

13. As to claims 8-14, they are rejected for the same reasons as stated in the rejection of claims 1-7.

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14. As to claim 15, it is rejected for the same reasons as stated in the rejection of claim 1. In addition, Bottom teaches one or more shared devices (USB devices) ([0029]); and a plurality of server blades coupled to said one or more shared devices via a service unit (media blade) ([0031]-[0033]), wherein said service unit is configured to establish a connection between one of said one or more shared devices and one of said plurality of server blades requesting to access said one of said one or more shared devices (connection with a blade interface of the midplane and media blade having a connection with a server blade) ([0031]-[0033]); wherein said requesting server blade comprises: a processor (Intel Pentium III processor) ([0026]); and a memory unit (system memory) coupled to said processor, wherein said memory unit is operable for storing a program ([0026]).

15. As to claims 16-20, they are rejected for the same reasons as stated in the rejection of claims 2-6.

16. As to claim 21, it is rejected for the same reasons as stated in the rejection of claim 5.

17. As to claim 22, it is rejected for the same reasons as stated in the rejection of claim 7.

Response to Arguments

18. During patent examination, the pending claims must be “given their broadest reasonable interpretation consistent with the specification.” *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d

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1664, 1667 (Fed. Cir. 2000). Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969).

19. *Applicant argues on page 2 of the Remarks that a 35 USC 112, 2nd paragraph rejection for claims 1, 8, and 15 is not appropriate because the scope of the claimed subject matter can be determined by one having ordinary skill in the art, even though the Examiner made a rejection due to there being no relationship made with anything else in the claim regarding switching.*

In response, it is appropriate for claims 1 and 8 to be rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. Claim 15 was rejected for a completely different reason than claims 1 and 8. The Applicant fails to respond to this claim's rejection. It is not made clear whether claim 15 is a system or method claim. In line 1, a system claim is indicated, but in lines 11-22, the limitations start to resemble a method claim.

20. *Applicant argues on page 3 of the Remarks that the Examiner has not provided any objective evidence for combining Ream with Bowman.*

In response, the Examiner is confused because Ream and Bowman were not used in the rejections. A rejection based on the combination of DeForest and Bottom was made. The objective evidence is found on col. 2, lines 11-36 of DeForest.

21. *Applicant argues on page 4 of the Remarks that the Examiner's motivation is not a motivation as to why one of ordinary skill in the art with the primary reference (Bottom) in front*

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of him would have been motivated to modify Bottom with the teachings of the secondary reference (DeForest). The Examiner's motivation is a motivation for DeForest to solve its problem. The Examiner's motivation (column 2, lines 11-17 of DeForest) relates to synchronizing function values in a shared resource unit providing shared resources to a plurality of resource users submitting requests in a plurality of protocols. This is not related to developing a simplified management and serviceability and unlimited scalability in order to provide higher revenues and cost savings for data center operators, as taught in Bottom.

In response, the Examiner respectfully disagrees. The motivation is proper to combine the references because both references are related (and the same field of endeavor) to controlling devices from a server blade (*Bottom, Fig. 1 and DeForest, Fig. 2, for example*). DeForest contributes the feature of receiving a request to access, issuing a query, and if not accessed, receiving a response of not available to Bottom's manager that handles the controls the switching. The motivation to do the combination is that it improves the managing of the shared resource, which will in turn, decrease cost and complexity, etc. (*col. 2, lines 11-36*).

22. *Applicant argues on pages 5-6 of the Remarks that the Examiner has not presented a reasonable expectation of success when combining Bottom with DeForest.*

In response, the Examiner respectfully disagrees. The reasonable expectation of success is presented in the benefit of making the combination. In this case, it is beneficial for the combination to occur because it improves the managing of the shared resource, which will in turn, decrease cost and complexity, etc. (*col. 2, lines 11-36*).

23. *Applicant argues on pages 6-7 of the Remarks that by combining Bottom with DeForest, the principle of operation of Bottom would change, and therefore, there is no suggestion or motivation to make the proposed modification. By combining Bottom with DeForest, Bottom would no longer be able to have a modular server system with server blades connected to media blades.*

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). DeForest was merely used in a combination to teach the specific limitation that Bottom lacked. It was already shown that the including the feature was obvious to one of ordinary skill in the art because it improves the managing of the shared resource, which will in turn, decrease cost and complexity, etc. (*col. 2, lines 11-36*). DeForest does not teach away from Bottom.

24. *Applicant argues on page 8 of the Remarks that the "hot swap" does not teach switching.*

In response, the Examiner respectfully disagrees. The hot swap is part of the switch blades and the switch blades performs switching (*page 2, [0020]*).

25. *Applicant argues on pages 8-9 of the Remarks that Bottom nor DeForest, taken singly or in combination, do not teach or suggest "receiving a request to access a shared device from a server blade" nor do they teach or suggest that the request is of an access to a shared device.*

In response, the Examiner respectfully disagrees. DeForest teaches a shared resource unit providing shared resources with requests for it (*see Abstract, e.g.*).

26. *Applicant argues on page 9 of the Remarks that Bottom and DeForest does not teach issuing a query as to whether said shared device is being accessed.*

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In response, the Examiner respectfully disagrees. Bottom teaches monitoring and alarming functions of an Active Manager utilizing Server System Management that manages the communication between the server blades and shared devices (*[0029]*). DeForest teaches blade processors for performing the functions and operations to maintain and provide a shared resource (*col. 6, lines 20-27*) with a manager that receives a request to access a shared device, issuing a query as to whether the device is being accessed, and if not accessed, receiving a response of not available and waiting to receive a response that it is available (*lines 35-55*).

27. *Applicant argues on page 10 of the Remarks that Bottom and DeForest does not teach wherein if said shared device is not being accessed by said server blade then the method further comprises the steps of: receiving a response to said query indicating that said shared device is not available.*

In response, the Examiner respectfully disagrees. DeForest teaches blade processors for performing the functions and operations to maintain and provide a shared resource (*col. 6, lines 20-27*) with a manager that receives a request to access a shared device, issuing a query as to whether the device is being accessed, and if not accessed, receiving a response of not available and waiting to receive a response that it is available (*lines 35-55*).

28. *Applicant argues on pages 10-11 of the Remarks that Bottom and DeForest does not teach waiting to receive a response that said shared device is available.*

In response, the Examiner respectfully disagrees. Bottom teaches this limitation from the monitoring and alarming functions of the Active Manager utilizing Server System Management. There is waiting until the alarm is tripped (*[0026]*).

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29. *Applicant argues on page 11 of the Remarks that Bottom and DeForest do not teach or suggest one or more shared devices; and a plurality of server blades coupled to said one or more shared devices via a service unit, wherein said service unit is configured to establish a connection between one of said one or more shared devices and one of said plurality of server blades requesting to access said one of said one or more shared devices.*

In response, the Examiner respectfully disagrees.

30. *Applicant argues on page 12 of the Remarks that it is not seen in Bottom where a shared device connected to a server blade via a media blade.*

In response, the Examiner respectfully disagrees. The broadest reasonable interpretation of a shared device can include devices such as a portable optical disc drives, hard disk drives, etc. (page 3, [0029]). Bottom teaches accessing (communication with the midplane 170) a shared device (USB device via media blade) from a server blade ([0026], [0029]).

31. *Applicant argues on page 12 of the Remarks that Bottom and DeForest does not teach determining if said shared device is being accessed.*

In response, the Examiner respectfully disagrees. Bottom teaches accessing (communication with the midplane 170) a shared device (USB device via media blade) from a server blade ([0026], [0029]); and wherein if said shared device is not being accessed by said server blade then the method further comprises the steps of waiting to receive a response (monitoring and alarming functions of the Active Manager utilizing Server System Management) that said shared device is available (waiting until alarm is “tripped”) ([0026]). Bottom teaches monitoring and alarming functions of an Active Manager utilizing Server System Management that manages the communication between the server blades and shared devices ([0029]). However, Bottom fails to explicitly teach receiving a request to access, issuing a query, and if

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not accessed, receiving a response of not available. DeForest teaches blade processors for performing the functions and operations to maintain and provide a shared resource (*col. 6, lines 20-27*) with a manager that receives a request to access a shared device, issuing a query as to whether the device is being accessed, and if not accessed, receiving a response of not available and waiting to receive a response that it is available (*lines 35-55*).

32. *Applicant argues on pages 12-13 of the Remarks that Bottom and DeForest does not teach wherein if said shared device is not being accessed then the method further comprises the steps of: connecting said shared device with said server blade.*

In response, the Examiner respectfully disagrees. Bottom teaches a connection with a blade interface of the midplane and media blade having a connection with a server blade ([0031]-[0033]).

33. *Applicant argues on page 13 of the Remarks that Bottom and DeForest does not teach transferring said request to access said shared device to said shared device.*

In response, the Examiner respectfully disagrees. Bottom teaches that this is performed by the switch blades ([0020] and [0025]).

34. *Applicant argues on pages 13-14 of the Remarks that Bottom and DeForest does not teach determining if said shared device is being accessed by said server blade.*

In response, the Examiner respectfully disagrees. Bottom teaches that this is performed by the Active Manager utilizing Server System Management ([0020], [0025]).

35. *Applicant argues on pages 14-15 of the Remarks that Bottom and DeForest does not teach transferring said request to access said shared device to said shared device.*

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In response, the Examiner respectfully disagrees. In response, the Examiner respectfully disagrees. Bottom teaches that this is performed by the switch blades (*[0020] and [0025]*).

36. *Applicant argues on page 15 of the Remarks that Bottom and DeForest does not teach receiving said response that said shared device is available.*

In response, the Examiner respectfully disagrees. In response, the Examiner respectfully disagrees. Bottom teaches this limitation from the monitoring and alarming functions of the Active Manager utilizing Server System Management. There is waiting until the alarm is tripped (*[0026]*).

37. *Applicant argues on pages 15-16 that Bottom and DeForest does not teach transferring said request to access said shared device to said shared device.*

In response, the Examiner respectfully disagrees. In response, the Examiner respectfully disagrees. Bottom teaches that this is performed by the switch blades (*[0020] and [0025]*).

38. *Applicant argues on page 16 of the Remarks that Bottom and DeForest does not teach wherein said shared device is a Universal Serial Bus device. While the server blades includes a USB connector, there is no language in the cited passage that teaches that the server blade is connected to a shared device that is a USB device.*

In response, the Examiner respectfully disagrees. The broadest reasonable interpretation of a shared device can include devices such as a portable optical disc drives, hard disk drives, etc. (*page 3, [0029]*). Bottom teaches accessing (communication with the midplane 170) a shared device (USB device via media blade) from a server blade (*[0026], [0029]*).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Tang whose telephone number is (571) 272-3772. The examiner can normally be reached on 8:30AM - 6:00PM, Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kt
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